Listing of Claims

1.   (Currently Amended) A method for providing simultaneous voice and data (SVD)

service in a mobile communication system, comprising:

        performing SVD call processing that supports SVD service between mobile

terminals and base stations by using a SVD service option; and

        providing SVD service by ~~at least one of~~ transmitting and receiving voice and

packet data simultaneously using a radio link protocol (RLP) frame after service negotiation <u>is</u>

<u>performed</u> using the SVD service option ~~is completed~~.

2.   (Currently Amended) The method of claim 1, wherein ~~said step of~~ performing

<u>said</u> SVD call processing designates and uses a service reference ID for a new SVD service

option which is different from a pre-designated voice service option or packet data service

option.

3.   (Previously Presented) The method of claim 1, further comprising

        implementing in a media access control (MAC) sub-layer a voice RLP module,

which assembles voice frames into RLP frames such that voice and packet data can be

transmitted and received by means of RLP frames.

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4.   (Previously Presented) The method of claim 1, further comprising designating a voice RLP frame type using bit combinations not designated in a frame type field of a data RLP frame, in order to transmit and receive the voice and packet data by means of RLP frames.

5.   (Previously Presented) The method of claim 1, further comprising designating a voice RLP frame type using bit combinations not designated in a control field of a data RLP frame, in order to transmit and receive the voice and packet data by means of RLP frames.

6.   (Previously Presented) The method of claim 1, wherein said step of providing SVD service comprises at least one of transforming a packet data frame into a data RLP frame and transforming a voice frame into voice RLP frame, by using a frame type field or a control field not used in the data RLP frame.

7.   (Original) The method of claim 6, wherein the voice frame is transformed into the voice RLP frame by using bit combinations not used in the frame type field of the data RLP frame, if the voice frame is a full rate voice frame.

8.   (Original) The method of claim 7, wherein the voice RLP frame transformed from the fill rate voice frame comprises 168 bits of voice frame information, and 3 bits of frame type information indicating which frame type is the voice RLP frame type.

9.　　(Original) The method of claim 6, wherein the voice frame is transformed into the voice RLP frame by using bit combinations not used in the control field of the data RLP frame, if the voice frame is a half rate voice frame or a voice frame under 1/2 rate.

10.　　(Original) The method of claim 9, wherein the data RLP frame used for transforming the half rate voice frame or voice frame under 1/2 rate into the voice RLP frame is one of control frame, fragmented/assembled data frame, fill frame and idle frame.

11.　　(Original) The method of claim 9, wherein the voice RLP frame transformed from the half rate voice frame or voice frame under 1/2 rate is a half or 1/2 rate voice RLP frame, comprising 8 bits and 66 bits of voice frame information and 6 bits of control field information indicating which frame type is a voice RLP frame type.

12.　　(Original) The method of claim 9, wherein the voice RLP frame transformed from the half rate voice frame or voice frame under 1/2 rate is a quarter or 1/4 rate voice RLP frame comprising 8 bits and 26 bits of voice frame information and 6 bits of control field information indicating which frame type is a voice RLP frame type.

13.　　(Original) The method of claim 9, wherein the voice RLP frame transformed from the half rate voice frame or voice frame under 1/2 rate is an eighth or 1/8 rate voice RLP frame

comprising 8 bits and 6 bits of voice frame information and 6 bits of control field information

indicating which frame type is a voice RLP frame type.

14.   (Currently Amended) A method for providing simultaneous voice and data (SVD)

service in a mobile communication system, comprising:

performing SVD call processing that supports SVD service through SVD request

signaling message exchange, when SVD service is requested after packet data call setup between

a mobile terminal and a base station is completed; and

providing SVD service by at least one of transmitting and receiving voice and

packet data simultaneously using radio link protocol (RLP) frames after service negotiation is

performed completed through the SVD request signaling message exchange.

15.   (Previously Presented) The method of claim 14, further comprising implementing

in a media access control (MAC) sub-layer a voice RLP module, which assembles voice frames

into RLP frames such that voice and packet data can be transmitted and received by means of

RLP frames.

16.   (Previously Presented) The method of claim 14, further comprising designating a

voice RLP frame type using bit combinations not designated in a frame type field of a data RLP

frame, in order to transmit and receive the voice and packet data by means of RLP frames.

17.   (Previously Presented) The method of claim 14, further comprising designating a

voice RLP frame type using bit combinations not designated in a control field of a data RLP

frame, in order to transmit and receive the voice and packet data by means of RLP frames.

18.   (Currently Amended) The method of claim 14, wherein ~~said step of~~ providing said

SVD service comprises at least one of transforming a packet data frame into a data RLP frame

and transforming a voice frame into a voice RLP frame, by using a frame type field or a control

field not used in the data RLP frame.

19.   (Original) The method of claim 18, wherein the voice frame is transformed into

the voice RLP frame by using bit combinations not used in the frame type field of the data RLP

frame, if the voice frame is full rate voice frame.

20.   (Original) The method of claim 19, wherein the voice RLP frame transformed

from the full rate voice frame comprises 168 bits of voice frame information, and 3 bits of frame

type information indicating which frame type is the voice RLP frame type.

21.   (Original) The method of claim 18, wherein the voice frame is transformed into

the voice RLP frame by using bit combinations not used in the control field of the data RLP

frame, if the voice frame is a half rate voice frame or a voice frame under 1/2 rate.

22.   (Original) The method of claim 21, wherein the data RLP frame used for transforming the half rate voice frame or voice frame under 1/2 rate into the voice RLP frame is one of control frame, fragmented/assembled data frame, fill frame and idle frame.

23.   (Original) The method of claim 21, wherein the voice RLP frame transformed from the half rate voice frame or voice frame under 1/2 rate is a half or 1/2 rate voice RLP frame comprising 8 bits and 66 bits of voice frame information and 6 bits of control field information indicating which frame type is a voice RLP frame type.

24.   (Original) The method of claim 21, wherein the voice RLP frame transformed from the half rate voice frame or voice frame under 1/2 rate is a quarter or 1/4 rate voice RLP frame comprising 8 bits and 26 bits of voice frame information and 6 bits of control field information indicating which frame type is a voice RLP frame type.

25.   (Original) The method of claim 21, wherein the voice RLP frame transformed from the half rate voice frame or voice frame under 1/2 rate is an eighth or 1/8 rate voice RLP frame comprising 8 bits and 6 bits of voice frame information and 6 bits of control field information indicating which frame type is a voice RLP frame type.

26.   (Currently Amended) A mobile communication apparatus having a service

interface comprising:

a voice radio link protocol (RLP) module; and

a data RLP module at a MAC sub-layer, wherein ~~the apparatus is configured to~~

~~transmit and/or receive~~ voice and packet data <u>are simultaneously transmitted</u> together <u>in an</u>

~~using~~ RLP <u>frame based on outputs of the voice RLP module and data RLP module</u> ~~frames~~.

27.   (Currently Amended) The apparatus of claim 26, wherein the data RLP module is

configured to perform at least one of fragmentation of a packet data frame in an upper layer <u>or</u>

~~and~~ assembly of a packet data frame in the upper layer into the RLP frame.

28.   (Currently Amended) The apparatus of claim 26, the voice RLP module is

configured to perform at least one of fragmentation of a voice frame in an upper layer <u>or</u> ~~and~~

assembly of the voice frame in an upper layer into the RLP frame.

29.   (Previously Presented) The apparatus of claim 26, wherein voice RLP frames are

classified into full rate voice RLP frames, half rate voice RLP frames, quarter rate voice RLP

frames and eighth rate voice RLP frames.

30.   (Previously Presented) The apparatus of claim 26, wherein the apparatus is at least one of a mobile terminal and a base station.

31.   (Previously Presented) The apparatus of claim 26, wherein the apparatus is a mobile communication system comprising at least one mobile terminal and at least one base station.